

Chapter 4: State and Tribal Efforts

The PCSRF state and tribal partners play a key role in administering and managing the many on-the-ground projects directed at recovering threatened and endangered salmon and maintaining healthy salmon populations. The states of Alaska, California, Idaho, Oregon, and Washington and the Pacific Coastal and Columbia River tribes and tribal commissions each separately receive funding from the PCSRF and manage and sponsor salmon recovery and conservation projects within their jurisdictions. The projects undertaken are reviewed and awarded through grant processes conducted by the individual states and tribal entities. In addition to the federal PCSRF funds allocated, the states of California, Idaho, Oregon, and Washington are required to provide a 25 percent match of state funds for salmon recovery activities under their MOUs with NMFS. All of the states have met this requirement and, since program inception, California, Oregon, and Washington have provided 50 percent or more in state-matching funds. In the past year, overall state-matching funds nearly equaled federal funding. Given the lags in funding cycles, only 15 percent of FY 2006 PCSRF federal funds have been committed to projects by the states and tribes, resulting in lower percentages for FY 2006 funding reported in the following sections.

The following sections present an overview of the activities and accomplishments by each state and tribal entity. The types, numbers, and locations of projects and funding allocated are presented under each of the respective state and tribal sections. Additionally, detailed descriptions of a cross section of projects and their contribution to salmon recovery or conservation are highlighted in the sidebars.

Washington

In FY 2006 Washington's PCSRF appropriation was \$24.7 million. Washington's PCSRF and state-match funds are largely targeted toward habitat protection and restoration projects. The Washington Salmon Recovery Funding Board distributes and manages the PCSRF federal and state-matching funds using a competitive grant distribution process based on assessed needs and priorities for salmon recovery within the State of Washington. Exhibit 4-1 depicts the distribution of funds for projects in the state from program inception to November 30, 2006.

Washington has committed more than \$155 million in funding from the PCSRF toward salmon recovery and salmon habitat restoration projects. Additionally, the State of Washington has supplemented the PCSRF with over \$79 million in state salmon conservation and restoration funds (51 percent state match on PCSRF funds). Washington has committed approximately 33 percent of the 2006 PCSRF funds. With the total funds committed, Washington has accomplished the following for salmon recovery:

- » Removed 198 fish passage barriers, opening 304 stream miles through culvert removal and 579 stream miles through other barrier removal
- » Restored 148 miles of instream habitat
- » Installed 457 fish screens
- » Restored 10,935 acres of upland habitat
- » Reduced impacts from 281 miles of road
- » Restored 170 stream miles and 2,310 acres of riparian habitat

Exhibit 4-1: Washington Distribution of PCSRF and State-Matching Funds FY 2000-2006

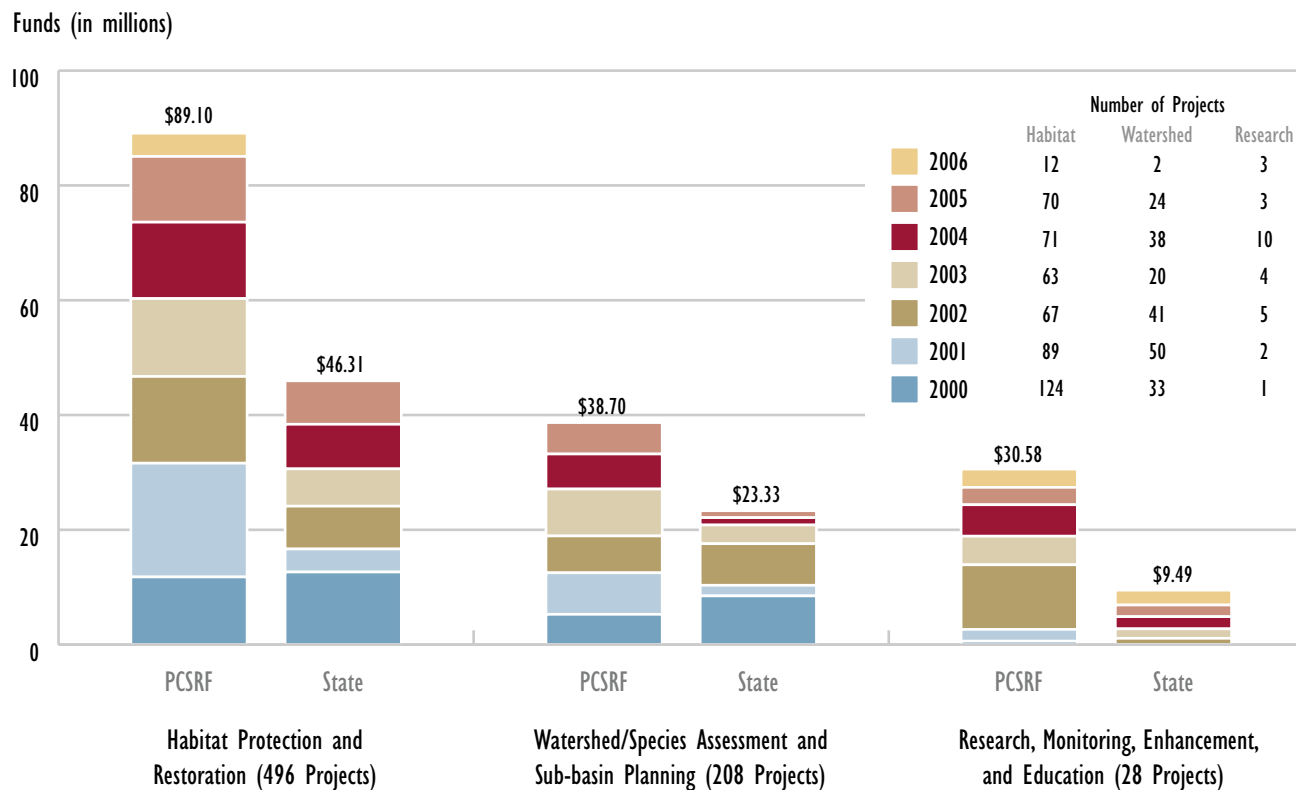
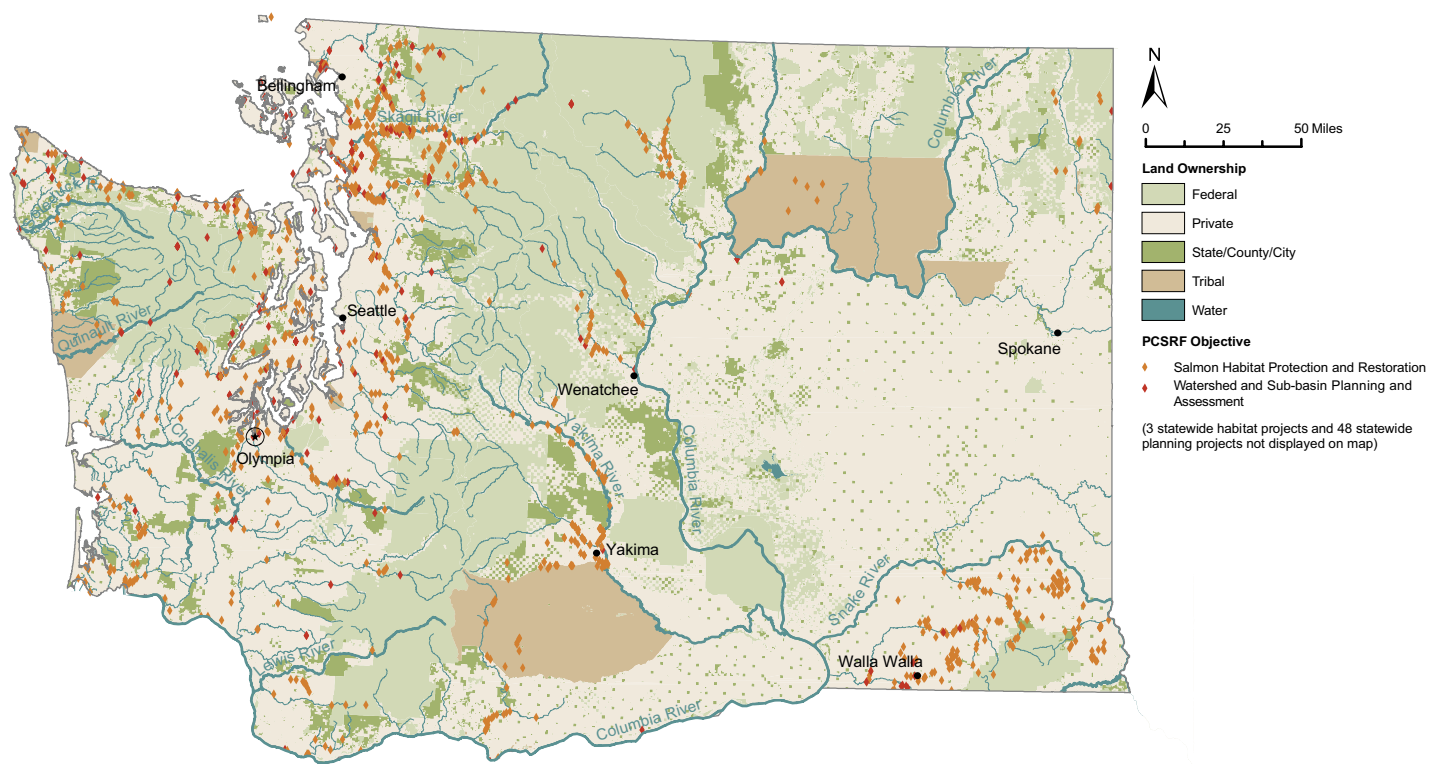


Exhibit 4-2: Locations of PCSRF Projects in Washington



Washington: Whidbey Island Juvenile Salmon Nearshore Monitoring

Since 2005, the Washington Salmon Recovery Funding Board has allocated PCSRF funds toward documenting juvenile salmon in nearshore habitat along Whidbey Island in Puget Sound. The project is conducted by Washington Trout, a non-profit conservation-ecology research organization dedicated to protecting and restoring wild fish in the state of Washington. The project is examining the loss of nearshore and estuarine habitat in Puget Sound and the impact on ESA listed Chinook salmon, Hood Canal summer chum salmon, as well as other species.

The use and importance of nearshore, estuarine, salt marsh, and lagoon habitats by juvenile salmon was recently identified as a high-priority data gap. The data generated by this project will assist in prioritization of habitat protection and restoration projects on the western shore of Whidbey Island. The results of this project may be used in the future to effectively target resources and efforts for nearshore habitat throughout the Puget Sound Region.

Washington Trout conducted beach seine sampling at 5 sites throughout 2006. All juvenile salmon collected were enumerated, identified, and analyzed to determine origin (e.g. hatchery vs. wild). Additionally, the project will conduct genetic sampling to determine origin.



- » Restored 297 acres and created 44 acres of wetland habitat
- » Restored 2,587 acres and created 1,579 acres of estuarine habitat
- » Restored 699 acres of riparian habitat
- » Treated 1,096 acres of estuarine habitat for invasive species
- » Protected 14,828 acres and 164 stream miles through land acquisition, easement, or lease

The locations of state and tribal PCSRF projects in Washington are shown in Exhibit 4-2. More information about Washington's salmon conservation and restoration efforts is available from the Governor's Salmon Recovery Office at <http://www.governor.wa.gov/gsro/> and from the Salmon Recovery Funding Board at <http://www.iac.wa.gov/srfb/>.



Oregon: Wallowa River/McDaniel Habitat Restoration

Completed in 2006, the Wallowa River/McDaniel Habitat Restoration Project restored riparian and floodplain habitat in the Grande Ronde Basin in northeast Oregon by reconstructing channel sinuosity. The project created a meandering channel capable of connecting with the floodplain in a previously steep and narrowed section of the river. The effort has yielded improved habitat diversity and water quality for salmon in the Wallowa River. Chinook salmon and steelhead were observed spawning in the newly constructed channel in the year following construction. The project was funded through PCSRF and other state and tribal partners.



Before



After

Oregon

In FY 2006 Oregon's PCSRF appropriation was \$6.4 million. Oregon designates the majority of its PCSRF funds to activities complementing habitat restoration and recovery efforts. The Oregon Watershed Enhancement Board (OWEB) administers the PCSRF federal and state-match funds through a competitive grant process for selecting salmon recovery projects. Under Oregon state law, the majority of state salmon recovery funding must be allocated to habitat restoration and protection projects in Oregon. The projects and programs supported include recovery planning, watershed councils, watershed assessments, and monitoring of fish populations, habitat conditions, and the effectiveness of restoration activities.

Since program inception, Oregon has committed approximately \$75 million in PCSRF funds and over \$126 million in state-matching funds for salmon recovery efforts (168 percent state-match). Oregon has committed approximately 47 percent of the 2006 PCSRF funds. Exhibit 4-3 displays the distribution of funds in Oregon from program inception to November 30, 2006. The locations of state and tribal PCSRF projects in Oregon are shown in Exhibit 4-4.

State and PCSRF resources supported the following salmon recovery achievements contributing to the overall improvement of habitat conditions in Oregon necessary for the survival of salmon:

- » Removed 1,252 fish passage barriers, opening 860 stream miles through culvert removal and 1,906 stream miles through other barrier removal
- » Restored 428 miles of instream habitat
- » Returned 427 cubic feet per second of instream flow to rivers and streams in the state
- » Restored 365,635 acres of upland habitat
- » Reduced impacts from 21,221 miles of road
- » Restored 15,959 acres and 3,500 stream miles of riparian habitat
- » Restored 10,460 acres and created 7,498 acres of wetland habitat
- » Treated 7,402 acres of riparian habitat for invasive species
- » Protected 50,278 acres and 147 stream miles through land acquisition, easement, or lease

In addition to the allocation of funding to salmon restoration projects, Oregon has allocated nearly \$2 million to employ displaced individuals in the fishing industry to implement salmon recovery projects along the Oregon coast. More information about Oregon's salmon conservation and restoration efforts is available from OWEB at <http://oregon.gov/OWEB/>.

Exhibit 4-3: Oregon Distribution of PCSRF and State-Matching Funds FY 2000-2006

Funds (in millions)

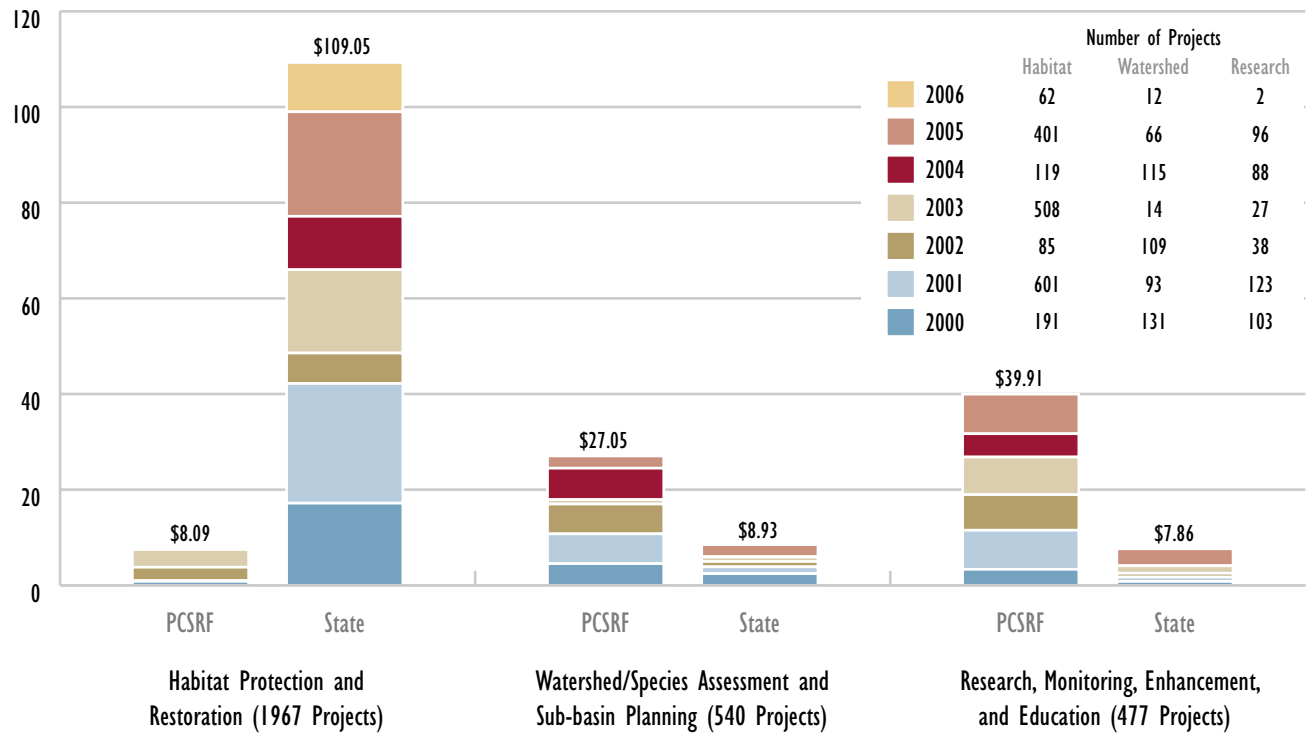
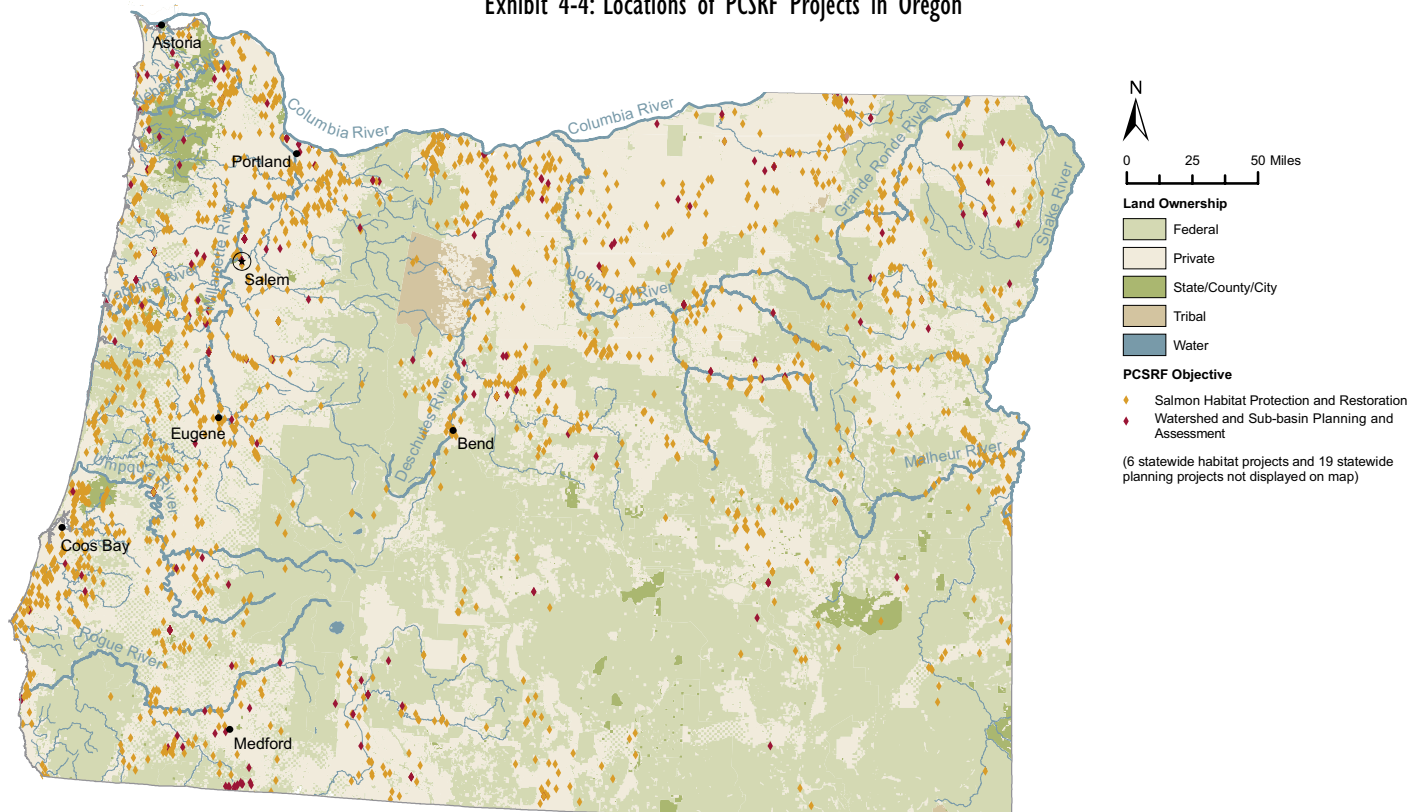


Exhibit 4-4: Locations of PCSRF Projects in Oregon



California

In FY 2006 California's PCSRF appropriation was \$6.4 million. California's PCSRF and state-matching funds are primarily directed to habitat restoration and protection projects critical to salmon survival and productivity in the coastal regions of the state. Managed by the California Department of Fish and Game, California distributes funding from the PCSRF and state-matching funds for salmon recovery and restoration through a competitive grant program.

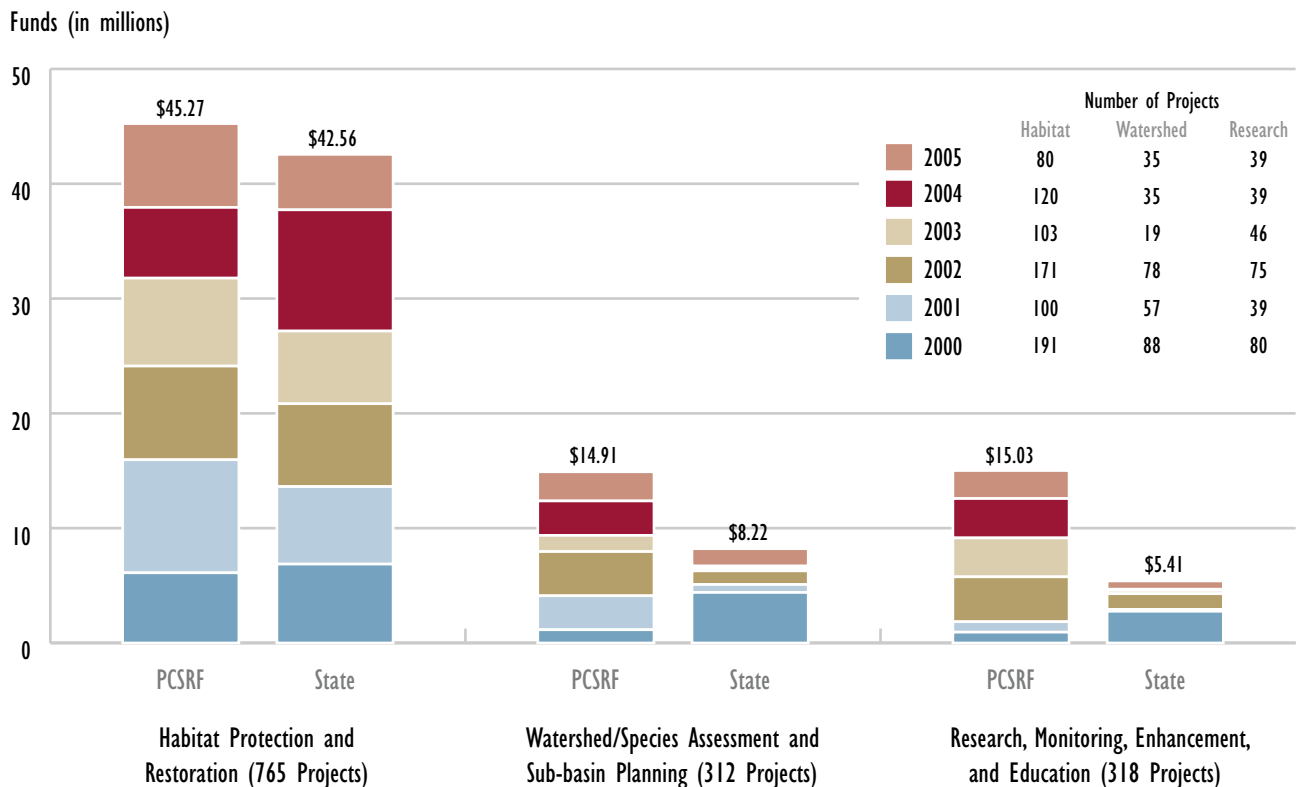
Since FY 2000, more than \$75 million of the PCSRF federal funds and \$56 million of state-match funds have been committed to salmon conservation and restoration activities (75 percent state-match). As of November 2006 California had not committed FY 2006 PCSRF funds. The distribution of California's funds is displayed in Exhibit 4-5.

California has accomplished the following activities for preserving and restoring salmon and salmon habitat with the PCSRF and state-match funds:

- » Removed 605 fish passage barriers, opening 95 miles through culvert removal and 451 miles through other barrier removal
- » Restored 610 miles of instream habitat
- » Restored 693 acres of upland habitat
- » Reduced impacts from 1,309 miles of road
- » Restored 614 acres and 169 stream miles of riparian habitat
- » Protected 26,258 acres through land acquisition, easement, or lease

Exhibit 4-6 shows the location of state and tribal projects funded by the PCSRF and state-matching funds in California. More information about California's salmon recovery efforts is available at <http://www.dfg.ca.gov/nafwb/fishgrant.html>.

Exhibit 4-5: California Distribution of PCSRF and State-Matching Funds FY 2000-2005



California: Horse Creek Dam Removal

In 2006, the California Department of Fish and Game (CDFG), in partnership with other funders, leveraged funding from the PCSRF to remove the Horse Creek Dam in the Los Padres National Forest to allow passage for the endangered Southern California steelhead. The dam was demolished using explosives. The project partners included NMFS, Los Padres National Forest, California Conservation Corp—Los Padres Center, the Community Environmental Council, the American Rivers Foundation, and Stoecker Ecological.

The Horse Creek Dam removal opened 15 miles of stream habitat above the dam. Horse Creek is a tributary to the Sisquoc River in northern Santa Barbara County. The Sisquoc River and its tributaries were designated as critical habitat for ESA-listed Southern California steelhead in 2005. The dam was originally constructed in 1968 to prevent debris flows following a large fire in the upper drainage basin. By the spring of 1969 the reservoir was completely filled with debris, blocking the passage of steelhead and other aquatic species into the upstream habitat and causing excessive streambed erosion downstream of the dam.

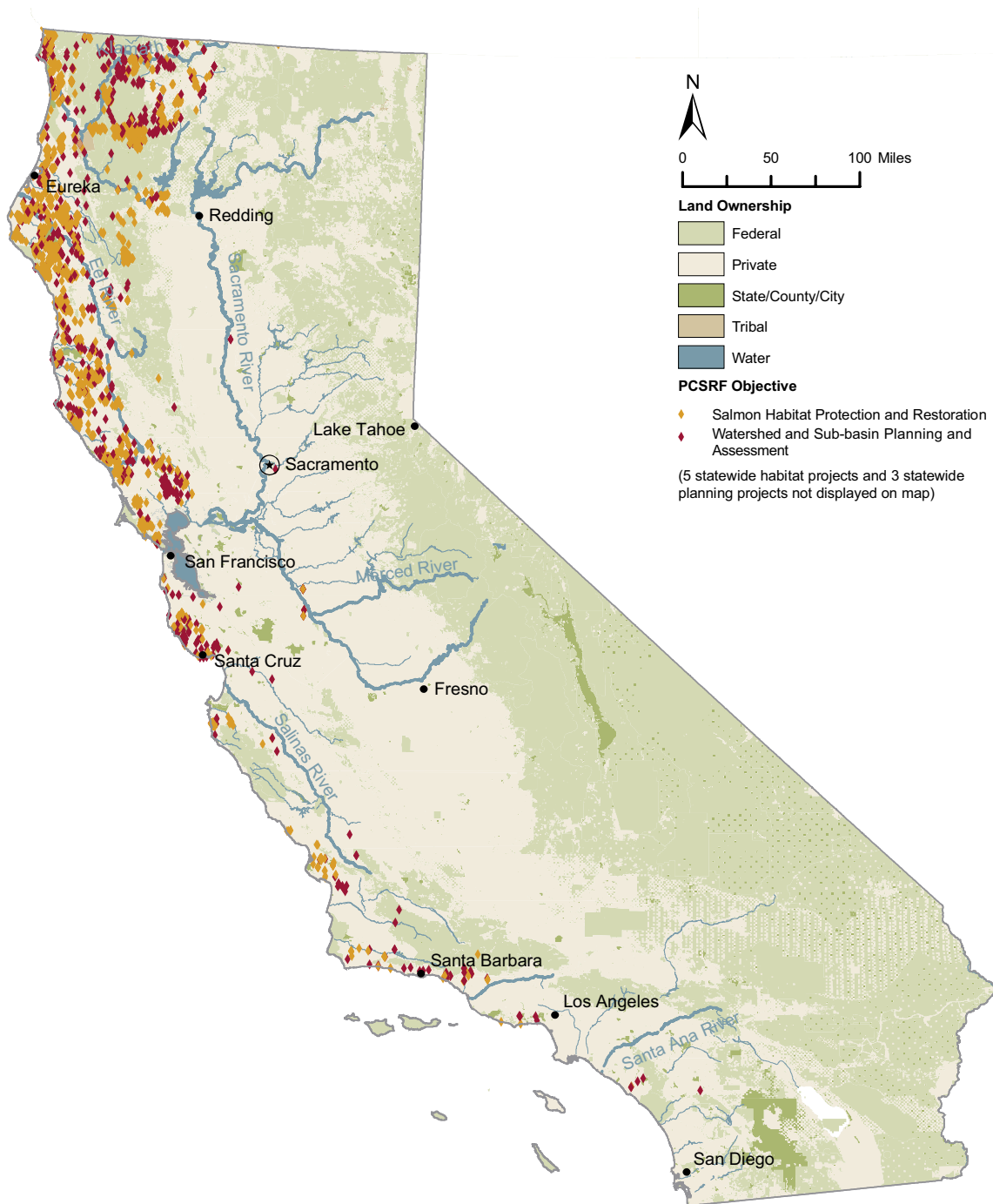
With the dam removed, CDFG plans to conduct biological and topographic surveys to gauge the response of the stream channel, as well as the response of fish and other aquatic species. The dam removal and restoration project has been funded by the PCSRF, U.S. Forest Service, CDFG, and American Rivers Foundation.



California has also used funds from the PCSRF to develop a web-based system to improve the ability to manage, retrieve, and process information necessary for restoring and recovering ESA-listed salmon and steelhead and their habitats throughout California. “CalFish” is an on-line integrated web-based fisheries and information system

that includes a variety of resources such as GIS spatial layers and tabular downloadable data, pre-made summaries and documents, tools and standards, and links to other relevant watershed and fisheries resource sites. The website was made public in January 2005.

Exhibit 4-6: Locations of PCSRF Projects in California



Idaho

In FY 2006 Idaho's PCSRF appropriation was \$2.2 million. Idaho directs a majority of funding from the PCSRF to salmon habitat protection and restoration projects. The Idaho Office of Species Conservation (OSC) administers the PCSRF for salmon recovery projects for the state of Idaho. OSC has committed approximately \$9.8 million from the PCSRF and \$4.1 million in state-matching funds (42 percent state-match) since Idaho's inception into the PCSRF in FY 2004. Idaho has committed approximately 29 percent of its 2006 PCSRF funds. Exhibit 4-7 depicts the distribution of funds through November 30, 2006 in Idaho.

Idaho PCSRF projects have achieved the following to improve the quality and quantity of habitat available to salmon:

- » Removed 61 barriers to fish passage, opening 406 stream miles
- » Restored 12 and stabilized 4 stream miles of instream habitat
- » Returned 255 cubic feet per second of water for instream flow
- » Restored 1,525 acres of upland habitat
- » Reduced impacts from 98.5 miles of road
- » Restored 532 acres and 37 stream miles of riparian habitat
- » Protected 1,800 acres and 16 stream miles of habitat through land acquisition, easement, or lease

The location of state and tribal projects in Idaho is shown in Exhibit 4-8. More information about Idaho's salmon and steelhead recovery efforts is available at http://osc.idaho.gov/list/salmon_steelhead.html.

Exhibit 4-7: Idaho Distribution of PCSRF and State-Matching Funds FY 2004-2006

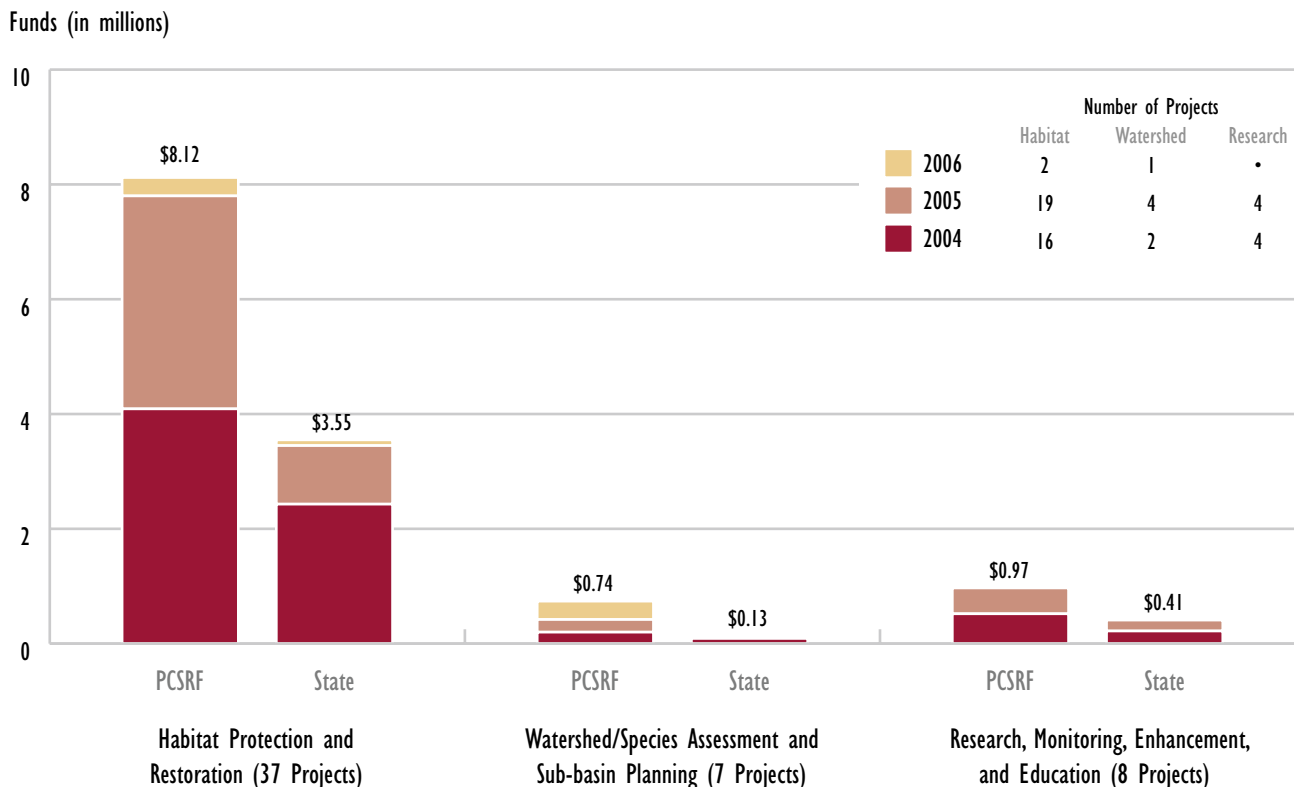
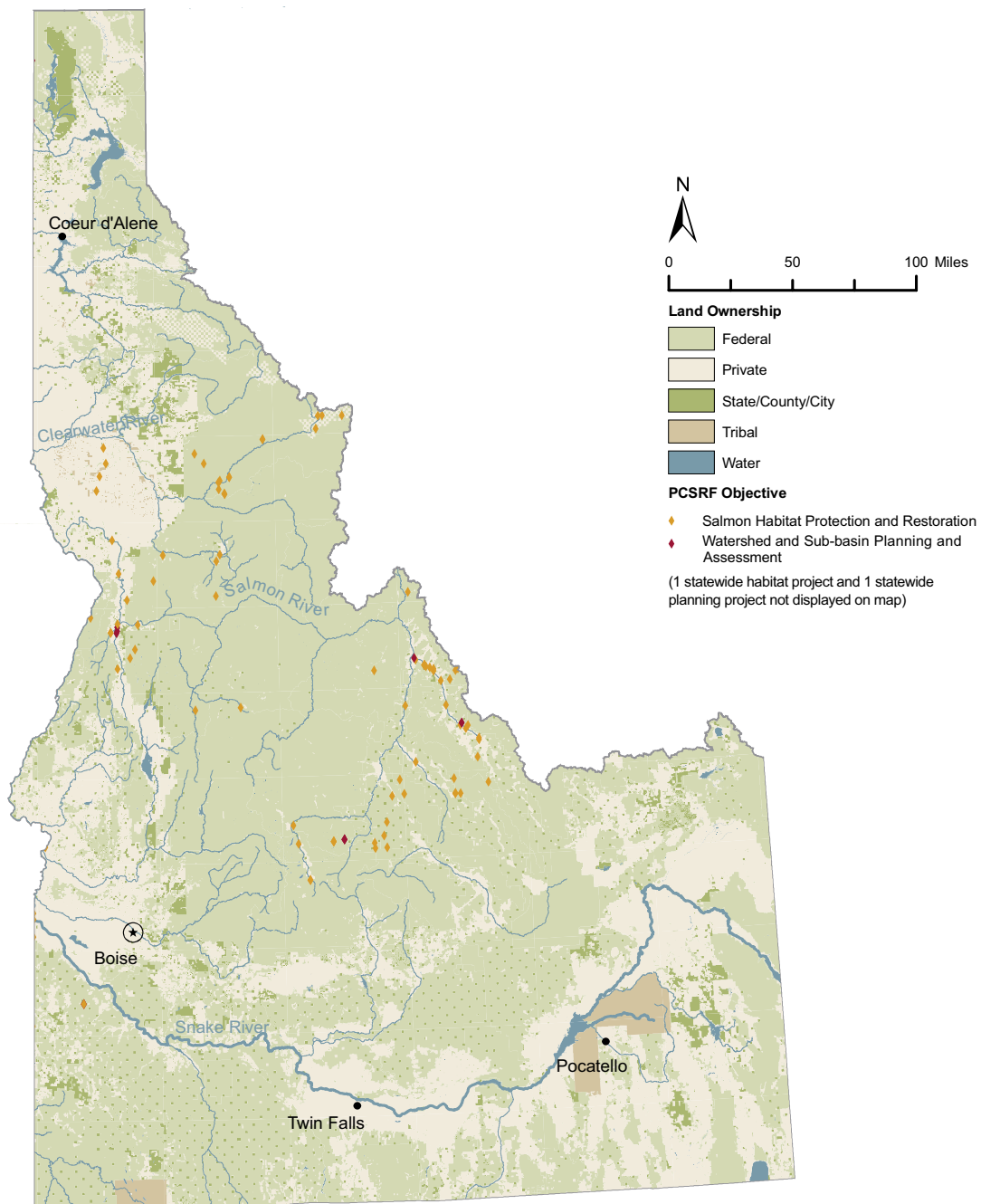


Exhibit 4-8: Locations of PCSRF Projects in Idaho



Idaho: Iron Creek Critical Habitat Restoration

The Idaho Office of Species Conservation, in conjunction with local landowners, used funding from the PCSRF to restore and reconnect critical salmon habitat in the Iron Creek watershed through barrier removal, instream flow restoration, and improved agricultural practices. The project changed agriculture flood irrigation to sprinkler irrigation, removed barriers to fish passage, and installed riparian fencing with a stock-watering system to keep livestock out of the watershed.

Iron Creek is a main-stem tributary of the Salmon River, between the East and North Forks. Within this reach of approximately 128 river miles, there exist only seven tributaries of significant size to provide thermal refuge for salmon and resident fish species. Iron Creek has been identified by local, state, and federal fish biologists as the most significant Salmon River tributary for thermal refuge in the 22-mile reach between Twelve Mile Creek and Hat Creek.

Thermal refuges such as Iron Creek are critical to salmon survival in the late summer months when water temperatures in the Salmon River become intolerable to salmon and other fish. In the past, irrigation practices seasonally dewatered sections of Iron Creek during the months when river temperatures are known to reach potentially lethal levels for salmon. Through the project, 5.4 cubic feet per second of flow has been restored in Iron Creek, along with the removal of four fish barriers to critical habitat.



Before



After

Alaska

In FY 2006 Alaska's PCSRF appropriation was \$21.7 million. The Alaska Department of Fish and Game manages Alaska's PCSRF program on behalf of the State of Alaska. Funding from the PCSRF primarily supports research, monitoring, enhancement, and education projects that help sustain Pacific salmon resources, salmon habitat, and salmon-dependent industry and communities. These efforts contribute to Alaska's sustainable salmon management programs. Alaska has successfully met biologically based escapement goals for 250 of 253 salmon indicator stocks over the past five years, and has no salmon stocks listed under the Endangered Species Act.

Since FY 2002, Congress has earmarked a substantial portion of Alaska's PCSRF funding for salmon education, watershed assessment and planning, habitat restoration, research and monitoring, and enhancement projects. The distribution of non-earmarked funding uses input and recommendations from interagency Advi-

sory and Science Coordination panels. Since 2000 the State of Alaska committed approximately \$104.1 million in PCSRF funds and \$17.41 million in state in-kind support for salmon sustainability. Alaska has committed approximately 1 percent of its 2006 PCSRF funds. Alaska's distribution of funds through November 30, 2006, is shown in Exhibit 4-9.

PCSRF and state in-kind investments have contributed to improvements in salmon habitat and management and to sustainable fisheries and management. Projects have:

- » Removed 351 barriers to fish passage, opening 34 stream miles
- » Reduced impacts from 58 miles of road
- » Restored 3,877 acres of wetland habitat

Projects are located throughout Alaska as shown in Exhibit 4-10. More information about Alaska's PCSRF program is available at <http://www.adfg.state.ak.us/special/ssf/ssf.php>.

Exhibit 4-9: Alaska Distribution of PCSRF and State-Matching Funds FY 2000-2006

Funds (in millions)

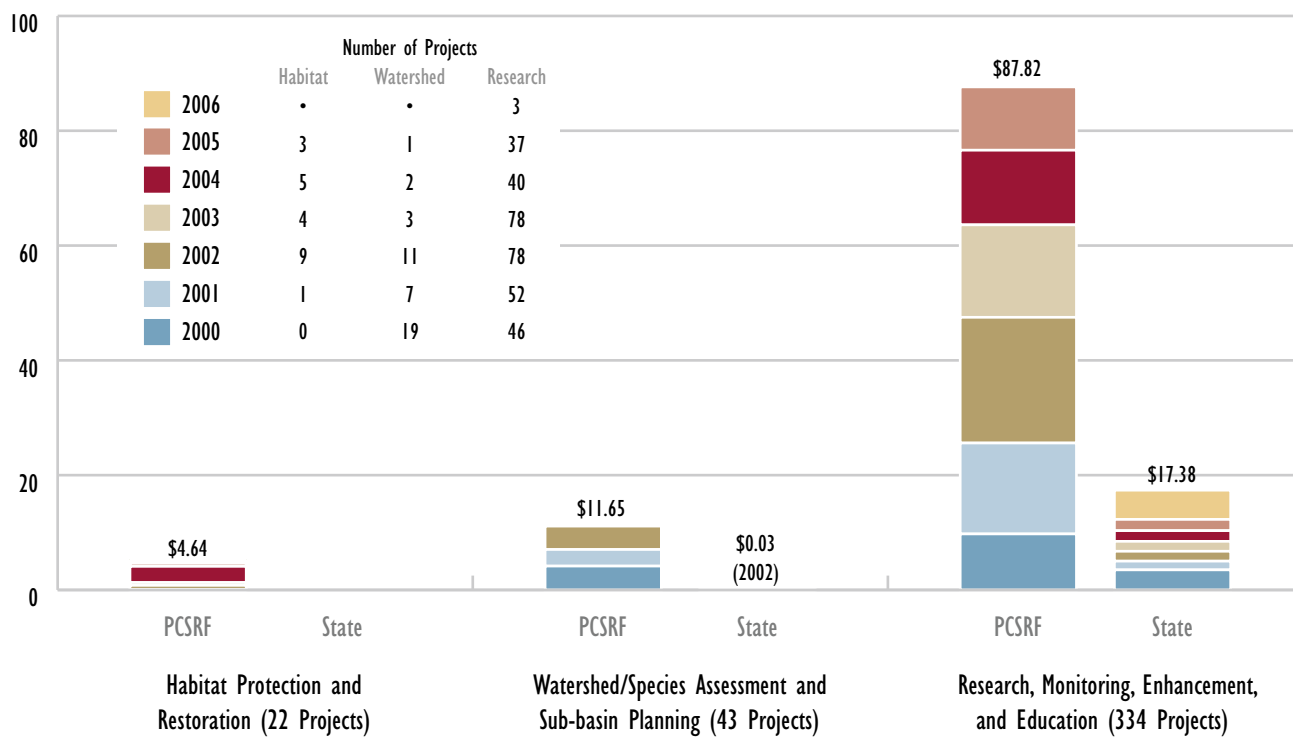
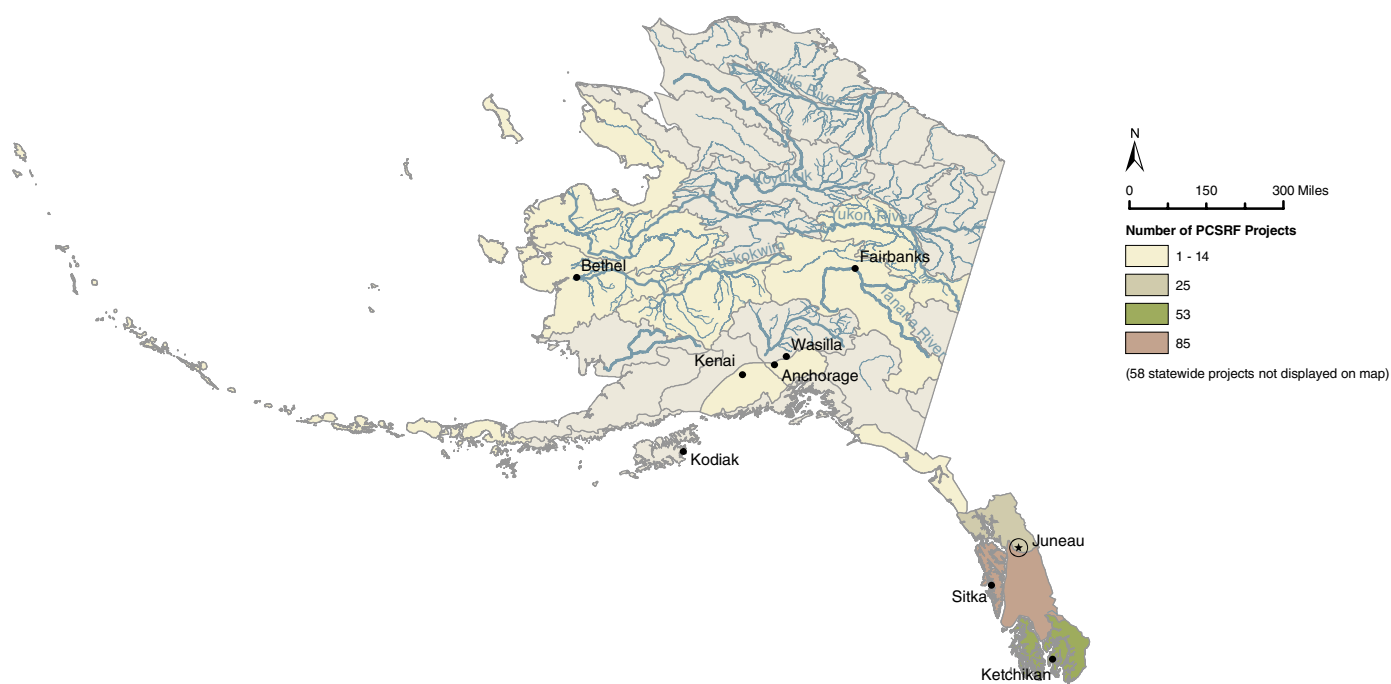
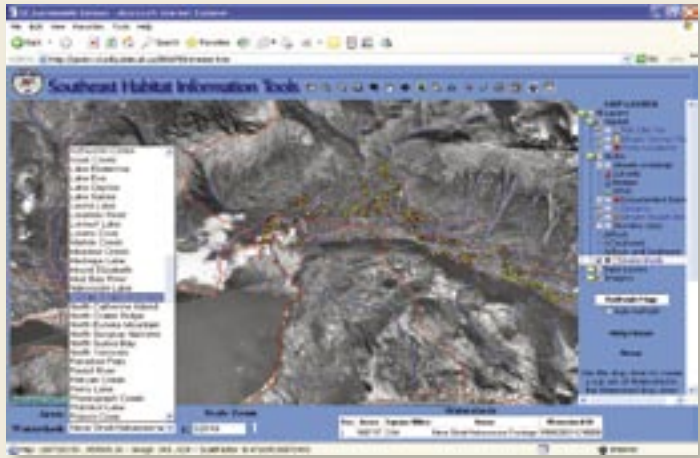


Exhibit 4-10: Locations of PCSRF Projects in Alaska



Alaska: Developing a Web-Based System for Improved Access to Salmon Resource Information

The State of Alaska is using funding from the PCSRF for development of a web-based system to improve the ability to manage, retrieve, and process important information necessary for sustaining Southeast Alaska salmon resources. With over 5,600 documented salmon streams in Southeast Alaska, the system will facilitate compilation of and access to important annual salmon resource and habitat information gathered through more than 30 datasets from 10 federal, state, local, and tribal entities. Alaska Department of Fish and Game staff currently has access to the developing system through local intranets, and the system will be made available to other agencies and entities across the public internet by May 2008 (www.adfg.state.ak.us).



Key information related to Southeast Alaska's abundant salmon resources incorporated in the system includes: salmon escapement information for managed stocks; catch reporting; upland and nearshore marine habitat distribution and condition; past land management activities; and location of stream crossing structures and evaluation of their fish passage status. Online reports and data download capabilities will be useful for watershed planning, project or activity permitting, and prioritization of future restoration opportunities that will help ensure the sustainability of Southeast Alaska's important salmon resources.

Monitoring and Trends in Non-ESA-Listed Salmon Populations in Alaska

The Alaska Department of Fish and Game (ADF&G) is responsible, under the state's constitution, to support salmon management in sustainable ways. A framework for Alaska salmon management is contained in the Sustainable Salmon Fisheries Policy (<http://www.adfg.state.ak.us/special/susalpol.pdf>).

The ADF&G has developed escapement goals for most of the state's salmon stocks or stock groups under the Alaska Escapement Goal Policy. Scientifically defensible methods are used to determine sustainable escapement goals that are based on historical assessments of stock specific escapements, catch, and productivity. Escapement goals represent management targets used to manage fisheries. The minimum escapement goals provide precautionary escapement thresholds; maintaining escapement above the thresholds effectively conserves the stocks in the face of variable production. ADF&G has developed and consistently maintained a comprehensive program of escapement assessment and fishery monitoring. The results of these assessments provide scientific information to maintain biologically based escapement goals and information to effectively manage salmon fisheries and maintain salmon escapements at sustainable levels. Escapement goals are reviewed and reports updated on a triennial schedule for each of the state's management areas.

Monitoring escapements relative to goals provides an indication of the status of salmon stocks and, over an extended period, the long-term sustainability of the resource. ADF&G has established escapement goals for 253 stocks/stock aggregates of salmon in Alaska. In the vast majority of cases, ADF&G reports that these escapement goals are met on an annual basis. As of March 2006, the Alaska Board of Fisheries has determined that only 3 (1 percent) of the 253 Alaska salmon stocks/stock aggregates are classified under the Sustainable Salmon Fisheries Policy as "Stocks of Management Concern." This means they have been below their respective escapement goal ranges for a period of four to five years.

Columbia River Tribes

In FY 2006 the Columbia River Tribe's PCSRF appropriation was \$1.2 million. The Columbia River tribes that receive direct funding from the PCSRF include the four Columbia River Inter-Tribal Fish Commission (CRITFC) member tribes, the Colville Confederated Tribes, and the Shoshone-Bannock Tribes. CRITFC acts as a technical support and coordinating agency and administers the PCSRF for the Nez Perce Tribe, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation of Oregon, and the Confederated Tribes and Bands of the Yakama Nation.

The Columbia River tribes have committed approximately \$16.2 million in funding from the PCSRF to habitat protection and restoration projects and research, monitoring, enhancement, and education projects in the Columbia River basin. The Columbia River tribes have committed approximately 30 percent of their 2006 PCSRF funds. Exhibit 4-11 displays the distribution of the PCSRF funding through November 30, 2006, for the Columbia River tribes in Washington, Oregon, and Idaho.

The Columbia River tribes have conducted the following activities to improve habitat conditions for salmon:

- » Restored 74 and stabilized 16 stream miles of instream habitat
- » Returned 10 cubic feet per second of water to instream flow
- » Restored 961 acres of upland habitat and reduced impacts from 13 miles of road
- » Restored 986 acres and 189 stream miles of riparian habitat
- » Protected 10,660 acres and 46 stream miles of habitat through land acquisition, easement, or lease
- » Treated 417 acres of riparian habitat for invasive species
- » Removed 33 barriers to fish passage, opening 279 stream miles

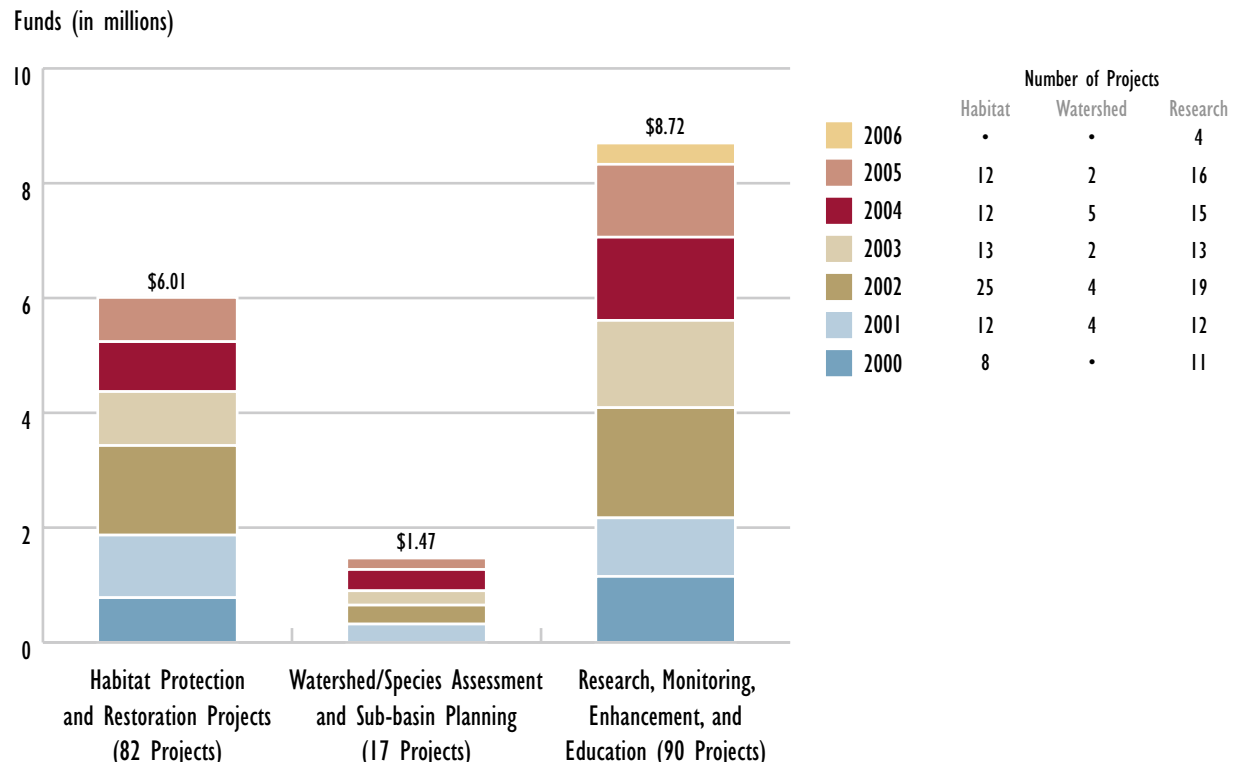
Confederated Tribes of the Umatilla Indian Reservation (Columbia River Tribes): Fletcher Levee Removal Project

During FY 2005-2006, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) removed 1,400 linear feet of the Fletcher levee and 2,200 cubic yards of associated cobble and rock fill in Camas Creek in the north fork of the John Day River basin in Oregon. The levee opened essential habitat for spring Chinook salmon, Middle Columbia summer steelhead DPS, and other fish species in the watershed by reconnecting the stream to the adjacent wetland areas. Additionally, the CTUIR realigned 350 linear feet of stream channel and enhanced the meander development to improve instream and riparian habitat conditions critical for salmon.

The Fletcher levee, prior to removal, limited the naturally occurring over-bank stream flows and channel meander in Camas Creek. If left unaddressed, the levee would have further degraded the streambed, leading to channel widening and decreased sinuosity of the creek. In addition to the levee removal, the project included wetlands fencing and protection and restoration of native plant species, conducted in cost-share partnership with several other agencies.



Exhibit 4-11: Columbia River Tribes Distribution of PCSRF Funds FY 2000-2006



Pacific Coastal Tribes

In FY 2006 the Pacific Coastal Tribe's PCSRF appropriation was \$3.9 million. Since FY 2000, funding from the PCSRF for Pacific Coastal tribes has been distributed to 29 tribes and their tribal commissions in Washington, Oregon, and California. In FY 2006, PCSRF funding was distributed to the Northwest Indian Fisheries Commission (NWIFC) on behalf of 20 western Washington treaty Indian tribes; to the Klamath River Inter-Tribal Fisheries and Water Commission (KRITFWC) on behalf of four Klamath River Basin tribes (Hoopa Valley Tribe, The Karuk Tribe of California, Yurok Tribe, and The Klamath Tribes); and to the Round Valley Indian tribes in the Eel River Basin in California.

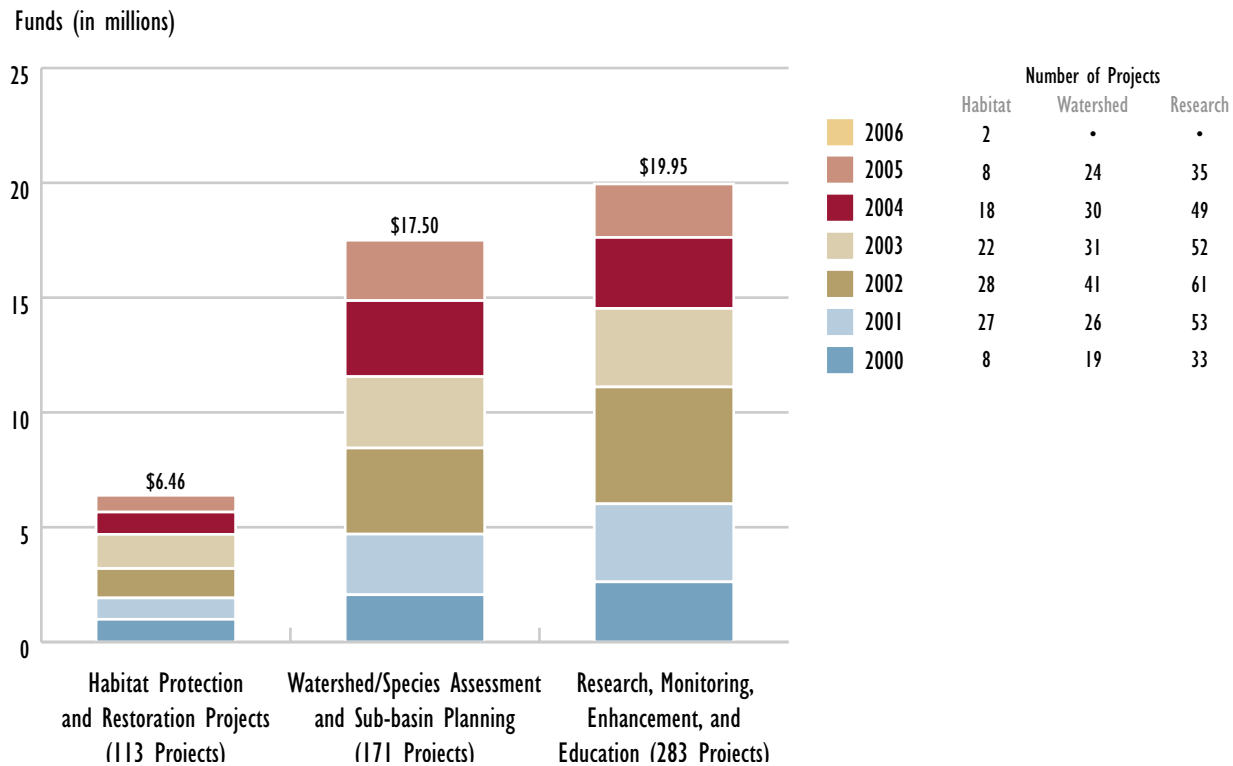
The Pacific Coastal tribes committed approximately \$43.9 million in funding from the PCSRF toward salmon conservation and recovery. The Pacific Coastal tribes have committed approximately 1 percent of their 2006 PCSRF funds through November 30, 2006. Most of the tribes' PCSRF funds were allocated to research, monitoring, enhancement, or outreach projects in Puget Sound

and Klamath River basins. The distribution of funds is displayed in Exhibit 4-12.

The Pacific Coastal tribes have conducted the following to improve habitat conditions for salmon:

- » Removed 95 barriers to fish passage, opening 88 stream miles
- » Restored 296 and stabilized 15 stream miles of instream habitat
- » Returned 40 cubic feet per second of water to instream flow
- » Restored 92 acres of upland habitat
- » Reduced impacts from 42 miles of road
- » Restored 1,271 acres and 224 stream miles of riparian habitat
- » Restored 65 acres of wetland habitat
- » Restored 139 acres of estuarine habitat
- » Treated 6,703 acres of riparian habitat for invasive species
- » Protected 690 acres of habitat through land acquisition, easement, or lease

Exhibit 4-12: Pacific Coastal Tribes Distribution of PCSRF Funds FY 2000-2006



Skokomish Tribe (Pacific Coastal Tribes): Skokomish Delta Dike Removal

In 2006, the Skokomish Tribe, in partnership with the City of Tacoma and Mason Conservation District, began a PCSRF project to remove 3,000 feet of dike on the Skokomish River Delta. The project is centered on a 108-acre parcel just west of the river's mouth, located within the tribe's reservation. In addition to dike removal, several tide gates and an access road will be removed.

Built in the 1940s, the dike has prevented the Skokomish delta from receiving a natural tidal flow, severely affecting the health of the estuary and eliminating critical juvenile salmon rearing habitat. The dike removal project aims to restore the natural nutrient flow into the delta to allow the habitat to recover from decades of deterioration.

This project is the first part of a multi-phase effort to restore more than 300 acres of the estuary to its historic conditions. The Skokomish River is the only river in the Hood Canal basin that directly supports Olympic Peninsula Hood Canal summer chum salmon, Puget Sound Chinook salmon, and bull trout—all listed as threatened under the federal Endangered Species Act.

